mycete "flora" of any given region, particularly because many of the species which develop are seldom collected in the field.

The 13 species of Myxomycetes listed below were developed in moist chamber culture on bark from living Florida trees. The names used are those accepted by Martin (1949). Specimens from all developments, either in their original form on the bark or as Hoyer's medium mounts or both are deposited in the cryptogamic herbarium of Michigan State College. Portions of the larger developments are also deposited elsewhere as noted. The numbers are those of my collection of Florida Myxomycetes.

No attempt was made to determine with certainty how many of the 13 species listed below are new to Florida. This would have necessitated a search of the major cryptogamic herbaria of the world. As West (1939) points out, "There are very few published records of the occurrence of Myxomycetes in Florida . . ." West's paper recording 79 species is the most comprehensive list of Florida slime molds available. Other Florida occurrences are mentioned by Hagelstein (1944), Lister (1925), Martin (1949), and Macbride and Martin (1934). Of the 12 previously known species recorded below, 5 are not listed as occurring in Florida in any of the above mentioned publications nor are they represented by Florida collections in the University of Florida Herbarium; two others are said to occur "throughout the United States and Canada" or to be "widely distributed throughout the United States" with no specific mention of Florida being made. The thirteenth species listed herein is probably new to science. Considering the very limited scope of this survey and the fact that the bark samples were collected entirely at random, these results are quite interesting and reveal the possibilities that future studies of this nature may have.

Family Liceaceae

Licea (?)*fimicola* Dearness & Bisby.

Fla-19, on rind of *Sabal palmetto*, 4 mi. so. of Crystal River, Sept. 18, 1951; Fla-28, Fla-31, Fla-36, same substratum and local., Mch. 29, 1953. Abundantly developed on most pieces of rind collected in March 1953, this species was identified tentatively as *L. fimicola* by Dr. G. W. Martin. The sporangia are minute, only .1 mm. in diameter, black by reflected, brown by transmitted light, and pulvinate rather than spindle-shaped. They generally

bear a cone of debris which gives them an erect appearance not unlike that of a perithecium of the Fimetariaceae. *Licea fimicola* was heretofore known only from Winnipeg, Manitoba, its type locality. Specimens of Fla-36 deposited at the University of Florida, the State University of Iowa, and the New York Botanical Garden in addition to Michigan State College.

Licea kleistobolus G. W. Martin

Fla-6, on bark of *Pinus caribaea,* w. of Davey, Aug. 31, 1951; Fla-9, on bark of *Taxodium distichum,* Pan Am. St. Pk., Sept. 9, 1951; Fla-13, on bark of *Melaleuca leucadendron,* Route 84, w. of Ft. Lauderdale, Sept. 1, 1951. Fla-6 is a large development on several pieces of caribaean pine bark. Fla-9 and Fla-13 consist of very few sporangia in spite of the fact that the total area of *Melaleuca* bark collected was two-fifths greater than that of pine bark. Portion of Fla-6 deposited at the University of Florida. This species was previously known in the United States only from New York, Pennsylvania, Michigan, Iowa, and Colorado.

Family Cribrariaceae

Cribraria minutissima Schw.

Fla-8, on bark of *Taxodium distichum,* Pan Am. St. Pk., Sept 9, 1951; Fla-18, Fla-23, Fla-25, on rind of *Sabal palmetto,* 4 mi. so. of Crystal River, Sept. 18, 1951; Fla-30, same substr.and local., Mch. 29, 1953; Fla-33 on bark of *Pinus caribaea,* same local. and date. This is one of the smallest of all species of *Cribraria.* In all cultures except two the cup is represented only by a minute disc or is entirely lacking. Other characters agree with the description of this species. Most developments are represented by several sporangia. Portion of Fla-8 deposited at the University of Florida.

Cribraria violacea Rex

Fla-7, on bark of *Taxodium distichum,* Pan Am. St. Pk., Sept. 9, 1951. A very small development of but two typical sporangia.

Family Trichiaceae

Arcyria cinerea (Bull.) Pers.

Fla-4, on bark of *Pinus caribaea,* w. of Davey, Aug. 31, 1951, occurring together with *Echinostelium minutum* and *Licea*

kleistobolus. The characters of all the sporangia developed on several pieces of bark approach those of *A. pomiformis.* They are more ovoid than cylindrical, ochraceous rather than cinereous, and bear yellow capillitium and spores. A portion of this development is deposited at the University of Florida. Substratum ident. Charles Gilly.

Family Echinosteliaceae

Echinostelium minutum De Bary

Fla-5, on bark of *Pinus caribaea,* w. of Davey, Aug. 31, 1951; Fla-10, Fla-11, on bark of *Taxodium distichum,* Pan Am. St. Pk., Sept. 9, 1951; Fla-12, on bark of *Melaleuca leucadendron,* on Route 84, w. of Ft. Lauderdale, Sept. 1, 1951; Fla-16, on *Quercus* sp., Coral Gables, Sept. 11, 1951; Fla-17 on bark of *Pinus palustris,* Univ. of Miami Arboretum, Sept. 11, 1951; Fla-34, on bark of *Pinus caribaea,* 4 mi. so. of Crystal River, Mch. 29, 1953. There are three distinct forms of this species represented here: the pure white form, represented by a great many sporangia, predominates on the *Pinus caribaea* developments; a few sporangia of pink form constitute developments Fla-12 on *Melaleuca,* and Fla-17 on *Pinus palustris;* and a few sporangia of a dark, purplish-gray form, whose spores appear smoky under the microscope constitute the developments on *Taxodium* and *Quercus.* No correlation is implied here between species of bark and color of sporangia; overlapping of forms has been observed. The dark form is of particular interest, for it does not appear to be very common. We have never encountered it in my laboratory in any of the *Echinostelium* bark cultures from Michigan trees which we have been observing during the last two years, and we did not find it in the few bark cultures from Jamaican trees which yielded *Echinostelium* in 1952. To my knowledge, this form has never been reported before. All the standard taxonomic works on Myxomycetes describe *Echinostelium minutum,* the only species in this genus, as white or colorless. Martin (1949) also mentions the pink form, and Gilbert and Martin (1933) state that "Many collections are distinctly pinkish or brownish." Pine substr. ident. by Charles Gilly. Portion of Fla-5 deposited at the University of Florida.

Family Stemonitaceae

Enerthenema papillatum (Pers.) Rost.

Fla-22, on rind of *Sabal palmetto,* 4 mi. so. of Crystal River, Sept. 18, 1951; Fla-37, same substr. and local., Mch. 29, 1953. Both consist of one sporangium each.

Comatricha cornea Lister & Cran

Fla-3, on bark of *Conocarpus erectus,* near Hollywood Beach, Aug. 31, 1951; Fla-14, Fla-15, on bark of *Melaleuca leucadendron,* w. of Ft. Lauderdale; Fla-29, Fla-32, Fla-35, on rind of *Sabal palmetto,* 4 mi. so. of Crystal River, Mch. 29, 1953. These developments consist of from one to eight sporangia of a *Comatricha* which closely resembles *C. cornea,* but which lacks the typical collar at the base of the columella. The stalks of some of the sporangia are enveloped in a transparent sheath. Although not exactly typical of *C. cornea* the specimens at hand are not sufficiently different to regard them as anything more than an ecological variation of that species. *C. cornea* has previously been reported in the United States only from Iowa, Kansas, and Michigan. A Hoyer's medium mount of Fla-35 has been deposited at the University of Florida, and one of Fla-29 at the State University of Iowa.

Comatricha fimbriata Lister and Cran

Fla-21, Fla-24, on rind of *Sabal palmetto,* 4 mi. so. of Crystal River, Sept. 18, 1951; Fla-38, same substr. and local., Mch. 29, 1953. Three very small developments typical of this species. Previously known in the United States only from Massachusetts, New York, Michigan, Iowa, and Kansas.

Comatricha sp. (Figs. 1, 2).

Fla-27, on rind of *Sabal palmetto,* 4 mi. so. of Crystal River, Sept. 18, 1951. This development consisted of but a single sporangium which was mounted for identification. Since it did not seem to fit the description of any of the known species of *Comatricha,* it was sent to Dr. G. W. Martin for identification. Dr. Martin expressed the opinion that it is an undescribed species. Whereas all the known material in existence is represented by one mounted sporangium it is not deemed advisable to

describe and name it as a new species at this time, but photographs of the sporangium and spores are being included in this paper to record this interesting *Comatricha*. The main features of this species are the abruptly tapering columella, the rhizoid-like hypothallus, and, particularly the banded-reticulate spores, measuring 6.5 - 8 μ, the reticulations of which are sometimes incomplete. The sporangium is ovoid and small, measuring .35 x .41 mm., the stalk is dark and short; the entire fructification is .9 mm. high. The peridium is entirely fugacious. An attempt was made to procure more material by returning to the same locality in the spring of 1953 and collecting rind from the same tree from which the original material had been obtained, and from neighboring palmetto trees, but none of the cultures yielded sporangia of the same species.

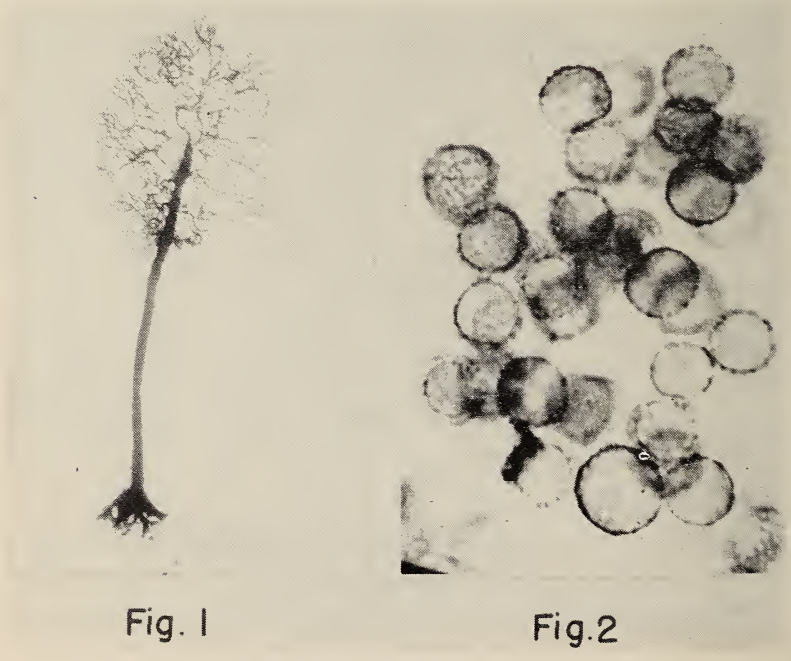

Figure 1.—Fructification of *Comatricha* sp., with most of the spores removed to show nature of columnella and capillitium. X 78.

Figure 2. Spores under oil immersion objective faintly showing banded reticulation. X 1400.

Clastoderma debaryanum A. Blytt.

Fla-1, on bark of *Casuarina equisetifolia*, near Hollywood Beach, Aug. 31, 1951. A fine development of several sporangia.

Family Didymiaceae

Diderma chondrioderma (De Bary & Rost.) G. Lister

Fla-2, on bark of *Ficus bengalensis*, near Hollywood Beach, Aug. 31, 1951. The few round, flattened fruiting bodies are pure white and crystalline. This species was previously known in the United States only from Iowa and California. Portion deposited at the University of Florida.

Family Physaraceae

Physarum nutans Pers.

Fla-20, Fla-26, on rind of *Sabal palmetto*, 4 mi. so. of Crystal River, Sept. 18, 1951. Fla-26 consists of a single sporangium.

Acknowledgments.—I wish to express my sincere thanks to Dr. G. W. Martin of the State University of Iowa for his identification of *Licea fimicola*, for examining material of *Comatricha* sp., and for his advice and help in many other ways; to Dr. D. P. Rogers of the New York Botanical Garden for the loan of various specimens for comparison, to Prof. Erdman West of the University of Florida for permission to examine the Myxomycete collection of the herbarium at Gainesville; to Dr. Charles Gilly of Michigan State College for identifying the species of pine from which bark was collected; to Mr. John E. Peterson, now of the University of Missouri for preparing the moist chamber cultures; and to Mr. Philip G. Coleman of the Michigan Agricultural Experiment Station for preparing the photomicrographs.

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A NEW FLORIDA JOURNAL

EVERGLADES NATURAL HISTORY. Volume 1, no. 1, pp. 1-38; Vol. 1, no. 2, pp. 39-86. Published quarterly by the Everglades Natural History Association, Box 275, Homestead, Florida. Edited by Joseph C. Moore. Subscription $2.00.—Here is a new journal which is devoted to the natural history of southern Florida. Although many of the contributors to these first two numbers are professional zoologists and botanists the articles are written for popular consumption. Each number to date contains seven or eight main articles, a section for natural history notes, a book review section and a short series of background notes about the authors.

The journal has an attractive cover and is printed on good quality enamel paper. The half-tones, which are used liberally, are in general good.

The magazine is apparently aimed at the throng of amateur naturalists who visit southern Florida in general and the Everglades National Park in particular. The content of the first two numbers is well balanced, comprising articles on various groups of animals and plants as well as one on the geology of the Miami Oolite. It is to be hoped that this balance continues so that the publication will not ultimately wind up as another local bird journal. I am told the demand for the first two numbers has been most gratifying and this should assure the publishers that a well balanced popular natural history journal has its place.

The first two numbers, although dated March and June, 1953, actually appeared only a few weeks apart in September, 1953. I believe that the difficulties causing this delay have been ironed out and prompt publication is to be expected in the future. This little journal seems to be practically unique in one respect—I understand its publishers have no particular financial worries!

All persons interested in Florida's natural history will want this journal and many of them will, I doubt not, become contributors to it. COLEMAN J. GOIN, University of Florida.

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